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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,697	07/22/2003	Martin Christ	11885-00016-US	7041
23416	7590	10/04/2006	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP			MOSS, KERI A	
P O BOX 2207			ART UNIT	PAPER NUMBER
WILMINGTON, DE 19899			1743	

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/624,697

Applicant(s)

CHRIST ET AL.

Examiner

Keri A. Moss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/22/03; 3/29/04; 8/5/04</u> .                                | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 1 recites the limitation "the non-conducting or semiconducting matrix" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.
4. Claims 2 and 3 recite the limitation "the ceramic matrix" in lines 15-16 and lines 20-21, respectively. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 are rejected under 35 U.S.C. 102(a) as being anticipated by Beck (EP 1 241 473 A1). Beck teaches a method of detection of oxidation of carbon-containing fibers or fiber-bundles in composites using the eddy current method, wherein the fibers

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or fiber bundles are electrically conducting short fibers isolated by the non-conducting or semiconducting matrix such that there is no skin effect upon electrical induction, comprising applying an alternating magnetic field to the composite, the eddy current generated within the fibers causing a signal which is markedly different for oxidated fibers and non-oxidated fibers (paragraph 18). The eddy current is generated in the fibers of a composite in which a ceramic matrix is present in at least a surface layer of the composite body or in which a ceramic matrix in at least the surface layer comprises SiC as main constituent and Si and/or Si alloys as further phases or in a composite material that can be subjected to high thermal load (paragraph 15). The carbon-containing fibers comprise carbon fibers, graphite fibers or fibers comprising one or more of the elements Si, B, C, N, Ti or P and/or fibers coated with carbon (paragraph 15). The signal is measured in a configuration where an induction coil (Fig. 1 part 13) and a testing coil (Fig. 1 part 11) are arranged on the same side of a shaped body (Fig. 1 part 3) made of composite.

7. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Plotard (Non Destructive Inspection for Carbon-Carbon with Adapted Coating for Oxidation, Aerospatiale, 1991). Plotard teaches a method of detection of oxidation of carbon-containing fibers or fiber-bundles in composites using the eddy current method, wherein the fibers or fiber bundles are electrically conducting short fibers isolated by a non-conducting or semiconducting matrix such that there is no skin effect upon electrical induction, comprising applying an alternating magnetic field to the composite, the eddy

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current generated within the fibers causing a signal which is markedly different for oxidated fibers and non-oxidated fibers (pages A25-26). The eddy current is generated in the fibers of a composite in which a ceramic matrix is present in at least a surface layer of the composite body or in which a ceramic matrix in at least the surface layer comprises SiC as main constituent and Si and/or Si alloys as further phases or in a composite material that can be subjected to high thermal load (Table n1). The carbon-containing fibers comprise carbon fibers, graphite fibers or fibers comprising one or more of the elements Si, B, C, N, Ti or P and/or fibers coated with carbon (Table n1). The signal is measured in a configuration where an induction coil and a testing coil are arranged on the same side of a shaped body made of composite (Fig. 2).

8. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Nixon (Non-Destructive Characterization of SiC Coated Carbon-Carbon Composites by Multiple Techniques, 24<sup>th</sup> International SAMPE Technical Conference, 1992, XP009032633). Nixon teaches a method of detection of oxidation of carbon-containing fibers or fiber-bundles in composites using the eddy current method, wherein the fibers or fiber bundles are electrically conducting short fibers isolated by a non-conducting or semiconducting matrix such that there is no skin effect upon electrical induction, comprising applying an alternating magnetic field to the composite, the eddy current generated within the fibers causing a signal which is markedly different for oxidated fibers and non-oxidated fibers (page T16). The eddy current is generated in the fibers of a composite in which a ceramic matrix is present in at least a surface layer of the

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composite body or in which a ceramic matrix in at least the surface layer comprises SiC as main constituent and Si and/or Si alloys as further phases or in a composite material that can be subjected to high thermal load (page T16-T17). The carbon-containing fibers comprise carbon fibers, graphite fibers or fibers comprising one or more of the elements Si, B, C, N, Ti or P and/or fibers coated with carbon (page T16). The signal is measured in a configuration where an induction coil and a testing coil are arranged on the same side of a shaped body made of composite (page T16).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keri A. Moss whose telephone number is 571-272-8267. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)272-1700. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keri A. Moss  
Examiner  
Art Unit 1743

10/1/06

  
Jill Warden  
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